Director of Central Intelligence

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Soviet Capabilities for Strategic Nuclear Conflict Through the Mid-1990s

National Intelligence Estimate
Key Judgments

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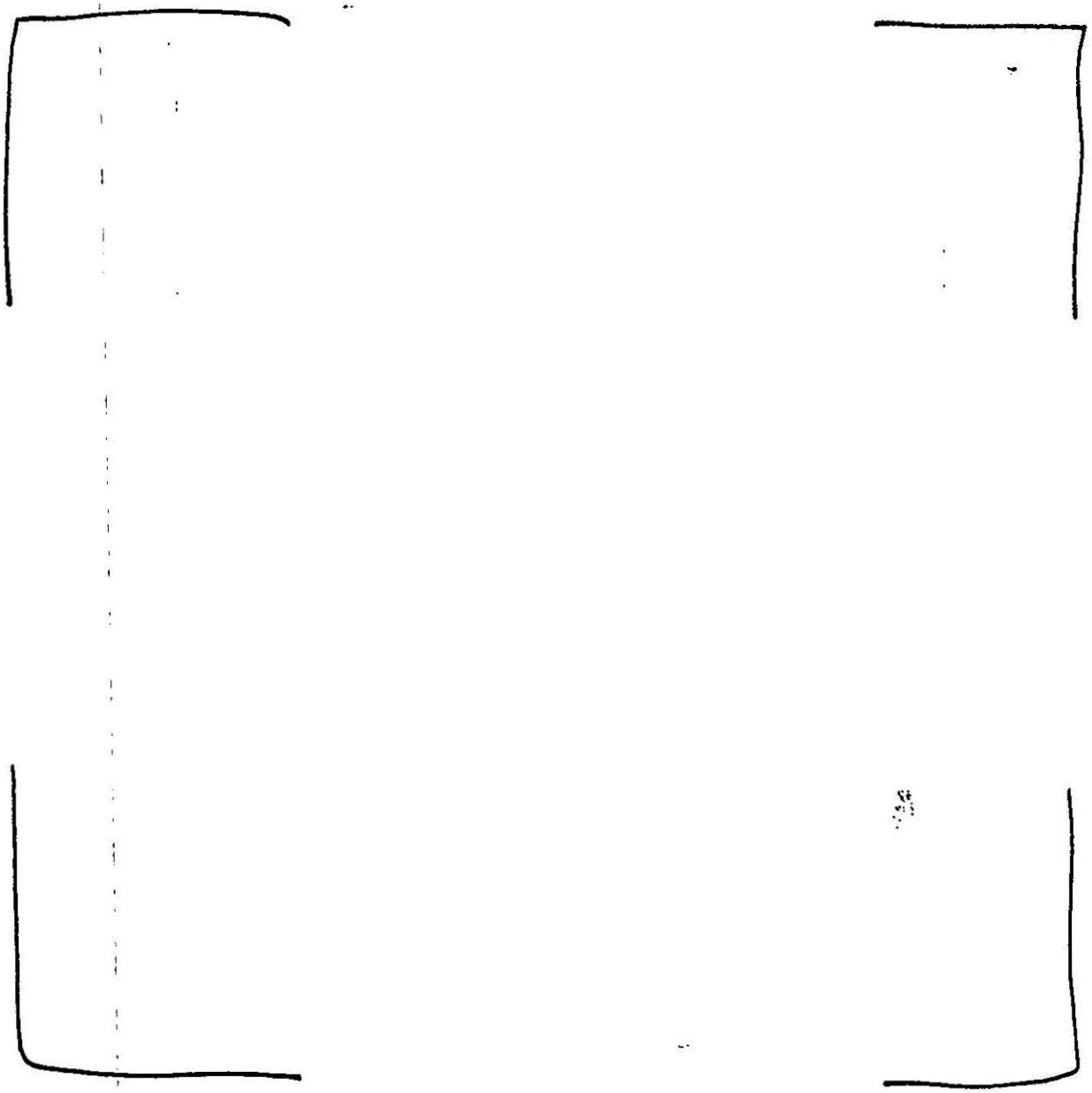
SOVIET CAPABILITIES FOR STRATEGIC NUCLEAR CONFLICT THROUGH THE MID-1990s

KEY JUDGMENTS

Information available as of 25 April 1985 was used in the preparation of this Estimate, which was approved by the National Foreign Intelligence Board on that date.



THIS ESTIMATE IS ISSUED BY THE DIRECTOR OF CENTRAL INTELLIGENCE.

THE NATIONAL FOREIGN INTELLIGENCE BOARD CONCURS, EXCEPT AS NOTED IN THE TEXT.

The following intelligence organizations participated in the preparation of the Estimate:

The Central Intelligence Agency, the Defense Intelligence Agency, the National Security Agency, and the intelligence organizations of the Departments of State and Energy.

Also Participating:

The Assistant Chief of Staff for Intelligence, Department of the Army

The Director of Naval Intelligence, Department of the Navy

The Assistant Chief of Staff, Intelligence, Department of the Air Force

The Director of Intelligence, Headquarters, Marine Corps

SCOPE NOTE

This NIE 11-3/8 summarizes the latest developments and projects future trends in Soviet weapons and supporting systems for strategic nuclear conflict. The Estimate contains projections of the size and composition of Soviet strategic forces under a variety of circumstances, including the presence or absence of arms control constraints.

We focus on the USSR's strategy, plans, operations, and capabilities for strategic nuclear conflict as we believe Soviet leaders perceive them. We have emphasized Soviet views on the origin and nature of a US-Soviet nuclear conflict and how the Soviets would plan to operate and employ their forces during the various phases of such a war.

In evaluating their capabilities to accomplish strategic missions, the Soviets differ from us in terms of the operational factors they consider, the analytic techniques they use, and their criteria for success. In this Estimate we have assessed trends in Soviet capabilities in terms familiar to US policymakers and analysts, although these assessments do not necessarily correspond to those the Soviets would make. We generally do not know how the Soviets specifically would evaluate their capabilities, and we have limited information pertaining to how they measure their ability to accomplish strategic missions.

This Estimate is in three volumes in addition to separately issued Key Judgments:

— ***Volume I*** contains:

- Summary of Soviet programs and capabilities believed to be of greatest interest to policymakers and defense planners.
- Key Intelligence Gaps (Annex A).
- Bibliography (Annex B).

— ***Volume II*** contains:

- Key recent developments.
- Discussion of the Soviets' strategic doctrine and objectives, including their views on the probable origin and nature of a US-Soviet nuclear conflict.
- Descriptions of Soviet programs for the development and deployment of strategic offensive and defensive forces and supporting systems.

- Projections of future Soviet strategic forces.
- Description of Soviet command, control, and communications capabilities and discussion of the peacetime posture of Soviet strategic forces.
- Discussion of Soviet concepts and plans for the operations of strategic forces during the several phases of a global conflict.
- Trends in the USSR's capabilities to carry out some missions of strategic forces in nuclear conflict.

— ***Volume III*** contains tables with detailed force projections and weapon characteristics.

KEY JUDGMENTS

By the mid-1990s, nearly all of the Soviets' currently deployed intercontinental nuclear attack forces—land- and sea-based ballistic missiles and heavy bombers—will be replaced by new and improved systems. New mobile intercontinental ballistic missiles (ICBMs) and a variety of cruise missiles are about to enter the force. The number of deployed strategic force warheads will increase by a few thousand over the next five years, with the potential for greater expansion in the 1990s. We are concerned about the Soviets' longstanding commitment to strategic defense, including an extensive program to protect their leadership, their potential to deploy widespread defenses against ballistic missiles, and their extensive efforts in directed-energy weapons technologies, particularly high-energy lasers. Their vigorous effort in strategic force research, development, and deployment is not new, but is the result of an unswerving commitment for the past two decades to build up and improve their strategic force capabilities.

Strategic Offensive Forces

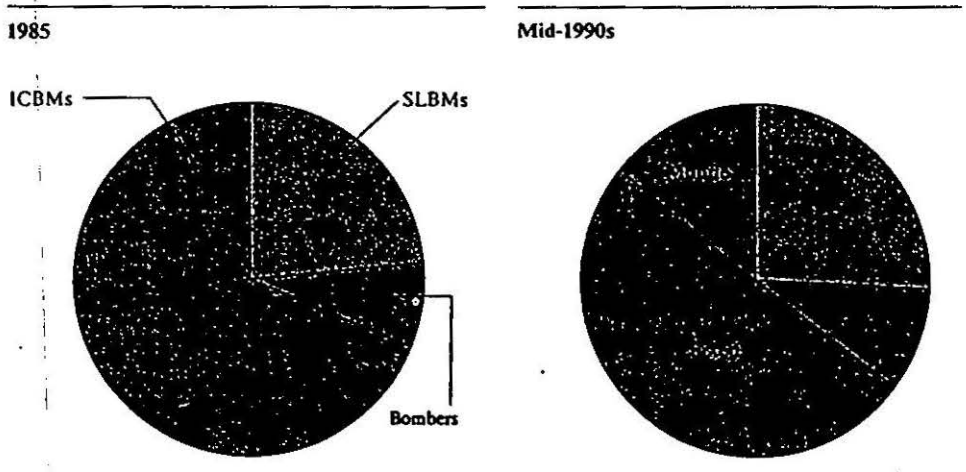
The most notable trend in offensive forces is the construction of bases for mobile strategic missiles—SS-20 intermediate-range ballistic missiles (IRBMs) and new ICBMs:

- During 1984, the Soviets embarked on an unprecedented program for constructing new SS-20 bases, starting more new bases than in any previous year.
- The Soviets have made major strides in preparing for the deployment of their two new mobile ICBMs—the road-mobile SS-X-25 and the rail-mobile SS-X-24. Soviet commitment to mobile ICBMs represents a major resource decision; such systems require substantially more support infrastructure than do silo-based systems, and thus are much more costly to operate and maintain.

All elements of Soviet strategic offensive forces will be extensively modernized by the mid-1990s. While the Soviets will continue to rely on fixed, silo-based ICBMs, mobile ICBMs will be deployed in large numbers (see figure 1), and major improvements will be made to the sea-based and bomber forces. The major changes in the force will include:

- An improved first-strike capability against hardened targets through further improvements to the heavy ICBM force.

Figure 1
Soviet Intercontinental Attack Forces, Warhead Mix



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— Significantly better survivability from improvements in the submarine-launched ballistic missile (SLBM) force—through quieter submarines and longer range missiles—and deployment of mobile ICBMs. Mobile ICBMs will also improve the Soviets' capabilities to use reserve missiles for reload and refire.[1]

— A substantial increase in the number of deliverable warheads for the bomber force as a result of the deployment of new bombers with long-range, land-attack cruise missiles.

ICBMs

The ICBM force, as shown in figure 2, will have been almost entirely replaced with new systems by the mid-1990s:

— The Soviets are preparing to deploy the SS-X-24 ICBM in silos in 1986 and on rail-mobile launchers in 1987. We expect SS-X-24–class ICBMs equipped with 10 multiple independently targetable reentry vehicles (MIRVs) to replace the MIRVed SS-17 and SS-19 silo-based ICBMs, which carry fewer warheads.

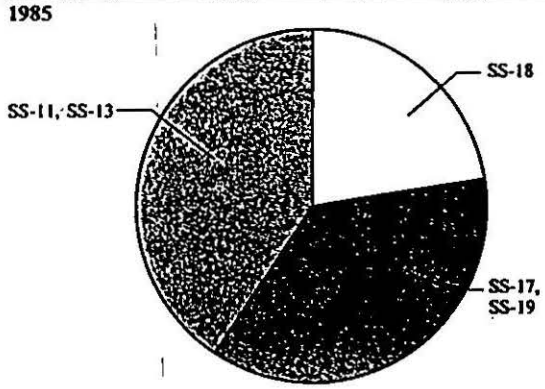
— The Soviets have started to retire older silo-based single-RV SS-11s as they prepare to deploy the single-RV road-mobile

[1] *For an alternative view of the Director, Bureau of Intelligence and Research, Department of State,* *see page 22.*

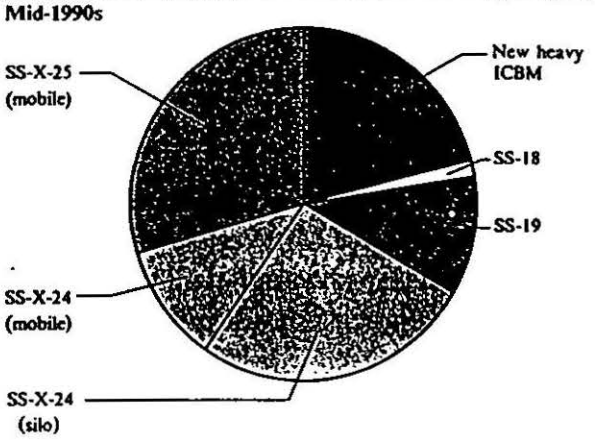
Figure 2
Modernization of Soviet ICBMs

Launchers

1985

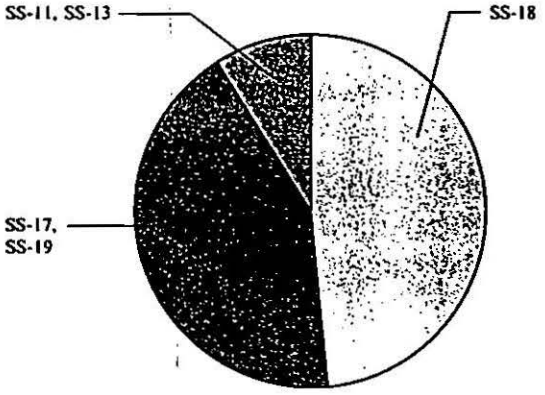


Mid-1990s

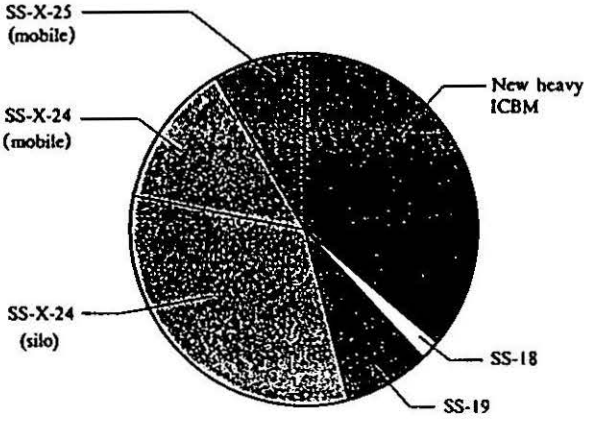


Warheads

1985



Mid-1990s



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SS-X-25. We expect the SS-X-25 to be operational by late 1985.

— We have evidence of at least three new ICBMs that we expect will be flight-tested in the 1986-90 time period:

  - A new silo-based heavy ICBM, to replace the SS-18, with improved capabilities against hardened targets.
  - A new version of the SS-X-24.
  - A new version of the mobile SS-X-25, which may have a three-RV payload option.

SLBMs

An extensive modernization program will result in replacement of the entire MIRVed Soviet SLBM force and deployment of much better nuclear-powered ballistic missile submarines (SSBNs). The major changes, as shown in figure 3, will include:

— Deployment of D-IV and additional Typhoon SSBNs. These boats have improvements that will contribute to their survivability, such as features that facilitate under-ice operations. In addition, we are projecting a new class of SSBN to enter the force in the early 1990s.

— Deployment of the new SS-NX-23 SLBM beginning in late 1985 or early 1986 on D-IVs and probably on D-IIIs. The increased range of the SS-NX-23, relative to that of the SS-N-18 missile currently on D-IIIs, will make SS-NX-23–equipped SSBNs more survivable. They will be able to operate under the Arctic icecap or closer to Soviet shores, where the Soviet Navy can better protect them.

— A replacement for the SS-N-20 on Typhoon SSBNs will probably be flight-tested in late 1985 or 1986, and a missile in the SS-NX-23 class will probably be tested later in the 1980s.

Heavy Bombers

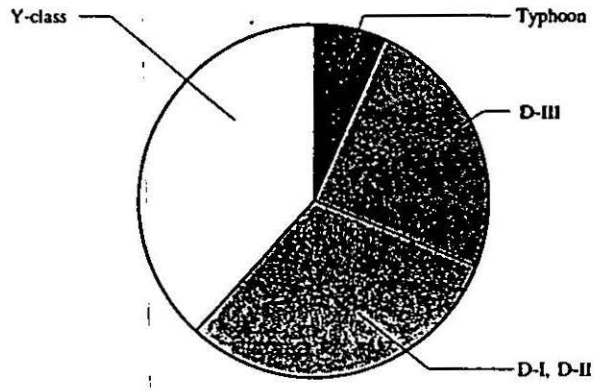
The Soviet heavy bomber force is undergoing its first major modernization since the 1960s; by the mid-1990s, as shown in figure 4 (page 8), most of the older bombers will have been replaced. The heavy bomber force will have a greater role in intercontinental attack:

— The AS-15 air-launched cruise missile (ALCM) became operational on the Bear H in 1984. By using newly produced aircraft of an old design, the Soviets were able to deploy ALCMs at least

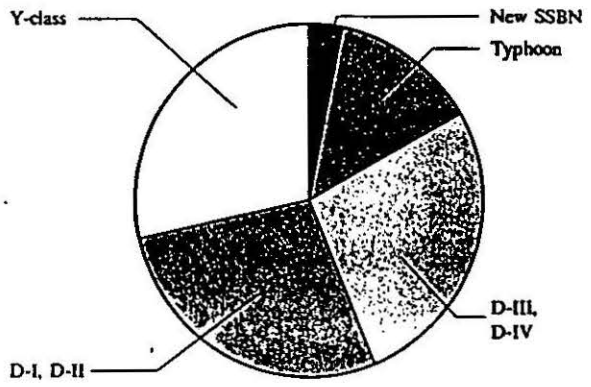
Figure 3
Modernization of Soviet SLBMs

Launchers

1985

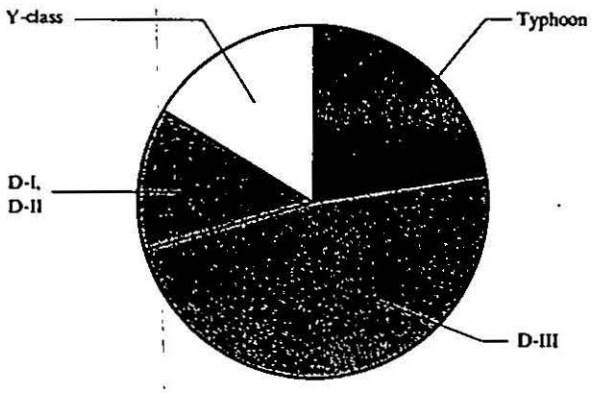


Mid-1990s

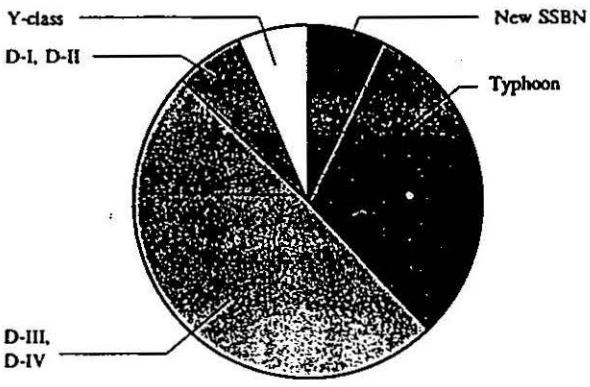


Warheads

1985



Mid-1990s



Note: Color changes for D-III and Typhoon in the mid-1990s indicate new missiles deployed in existing submarine classes.

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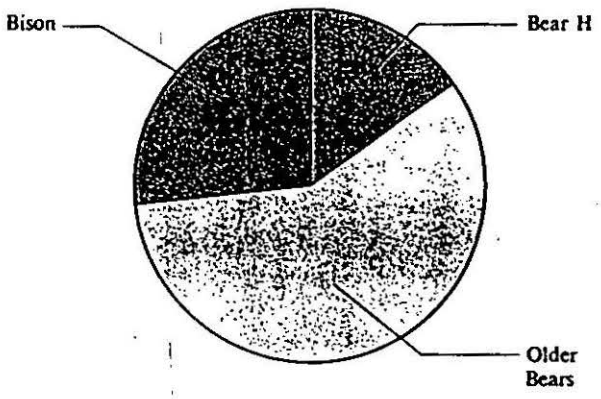
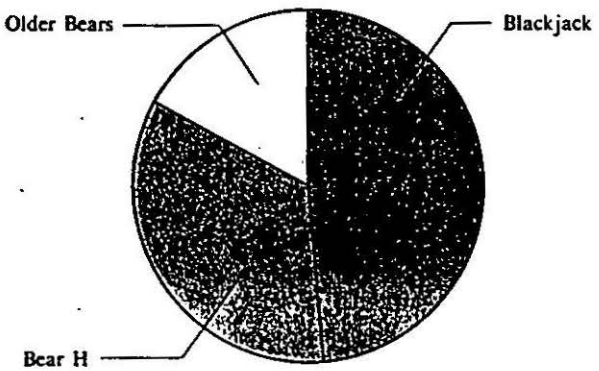
Figure 4
Modernization of Soviet Heavy Bombers

Heavy Bombers

1985

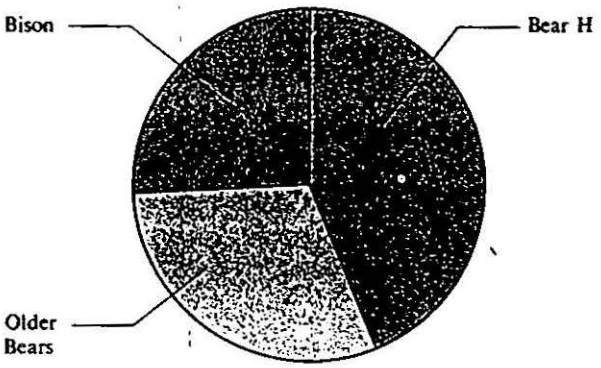


Mid-1990s

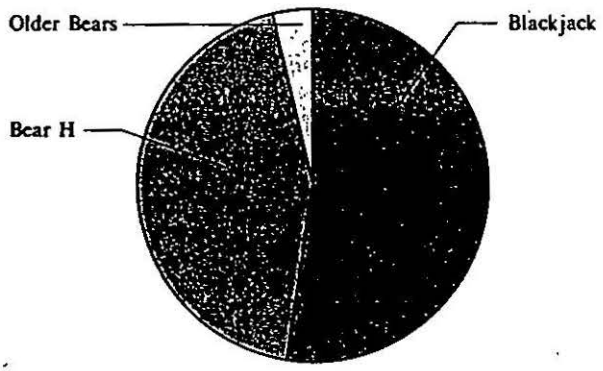


Heavy Bomber Weapons

1985



Mid-1990s



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four years earlier than if they had waited for the new Blackjack bomber.

— We project Blackjack will be operational in 1988 or 1989, carrying both ALCMs and bombs.

Growth of Intercontinental Attack Forces

The projected growth in the number of deployed warheads on Soviet intercontinental attack forces, under various assumptions, is shown in figure 5:

— The force currently consists of over 9,000 deployed warheads on some 2,500 deployed ballistic missile launchers and heavy bombers. Most warheads are in the ICBM force.

— Warheads are increasing: new Soviet Typhoon and D-IV submarines, Bear H bombers, and SS-X-24 ICBMs will carry many more warheads than the systems they are replacing.

— By 1990, if the Soviets continue to have about 2,500 missile launchers and heavy bombers and remain within the quantitative sublimits of SALT II, the deployed warheads will grow to over 12,000.

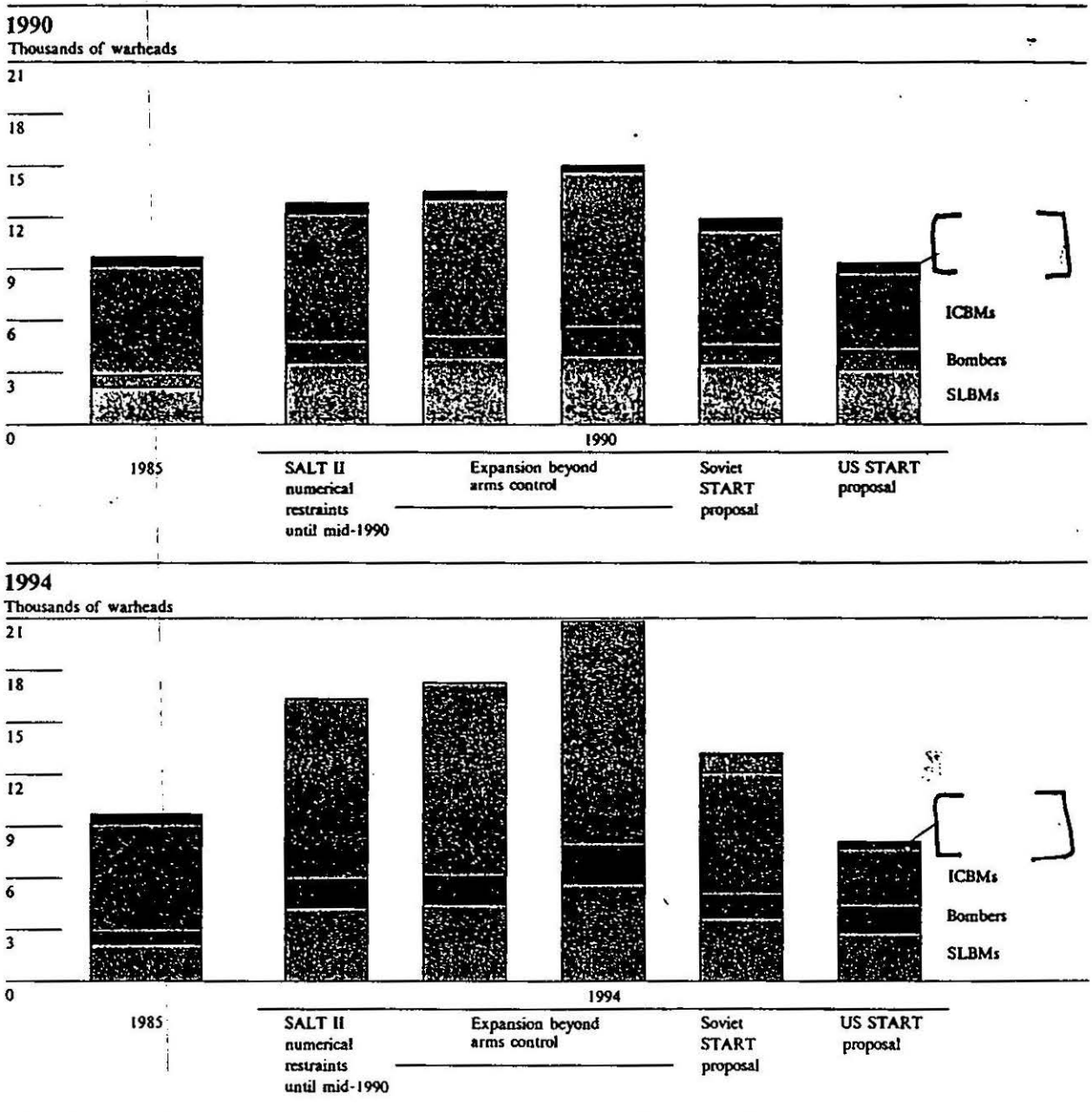
— The 1983 Soviet proposal at the strategic arms reduction talks (START) would also result in an expansion in warheads, although about 1,000 fewer by 1990 than under SALT II limits.

— The effect of the 1983 US START proposal would be to reverse this trend and, by the 1990s, lead to substantial reductions. We note, however, that it is highly unlikely the Soviets would modify their force along these lines; in particular, they almost certainly would not drastically reduce the number of heavy ICBMs, given the importance they attach to this system.

— While the Soviets would not necessarily expand their intercontinental attack forces beyond some 12,000 to 13,000 warheads in the absence of arms control constraints, they clearly have the capability for significant further expansion, to between 16,000 and 21,000 deployed warheads by the mid-1990s. The range reflects our uncertainties about Soviet technological choices, production capabilities, and the Soviets' own evaluation of their military requirements. The lower figure represents a continuation of recent trends in deployment rates; the upper figure is not a maximum effort but would require a substantially greater commitment of resources.

Estimates of the number of warheads on various Soviet ballistic missiles are becoming more uncertain [redacted]

Figure 5
Growth in Number of Deployed Soviet Strategic Force Warheads



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While there are differing views, we assess that the Soviets have deployed, and will continue to deploy, some missiles with more warheads than the maximum number flight-tested—the total of reentry vehicles (RVs) actually released plus those simulated.

The number of warheads could be significantly underestimated under an arms control agreement that counted deployed warheads by using the maximum number flight-tested on each missile type. This problem is of current concern

it will be a problem for future MIRVed ICBMs and SLBMs.

The Soviets will face important decisions in the next few years, as they proceed with flight-testing for ballistic missiles scheduled for deployment beginning in the late 1980s and early 1990s. Specifically, they will have to decide whether to test new ICBMs in such a way as to conform, or appear close to conforming, with limitations on characteristics and improvements from the unratified SALT II Treaty. They appear to have technical options for some of their new systems that will allow them to go either way.

Cruise Missiles

In late 1984 the Soviets began to deploy the AS-15 ALCM, the first in a series of deployments of long-range, land-attack cruise missiles. Over the next 10 years, we expect them to deploy large numbers of nuclear-armed ALCMs, sea-launched cruise missiles (SLCMs), and ground-launched cruise missiles (GLCMs). Estimated numbers are highly uncertain, but we project an aggregate total of 2,000 to 3,000. The deployment of cruise missiles provides the Soviets with new multidirectional, low- and high-altitude capabilities against US targets.

SS-20s

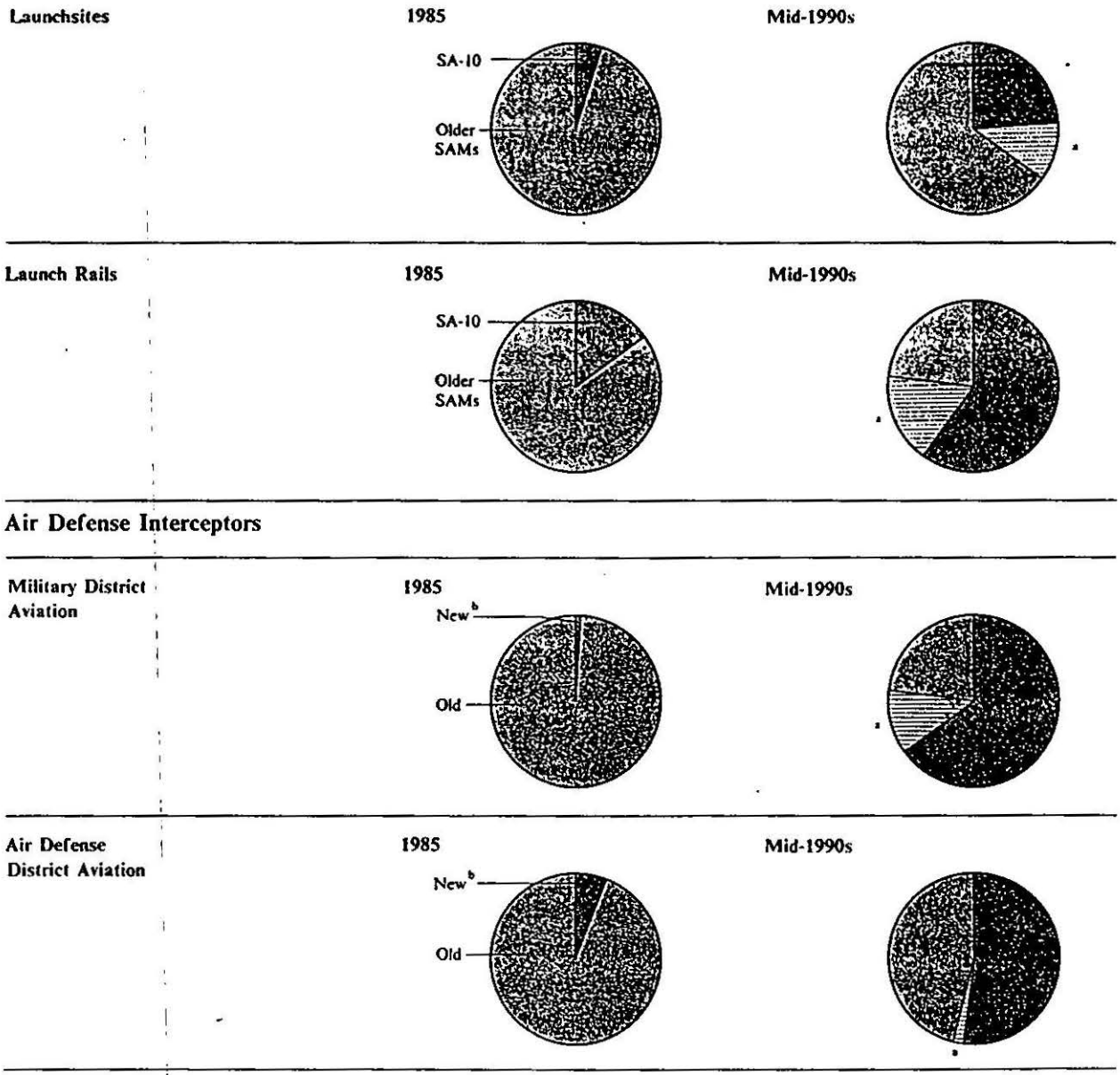
The SS-20 force is expected to expand to 477 to 540 deployed launchers by 1987, as a result of an extensive base construction program. This total is somewhat lower than projected last year, because we did not then anticipate the deactivation of SS-20 bases in the central USSR to convert to SS-X-25 ICBM bases. A follow-on to the SS-20, probably designed to improve lethality, began flight-testing in 1984.

Strategic Defensive Forces

The Soviets will significantly improve the capabilities of their active and passive strategic defenses over the next 10 years, as a number of new types of weapons are introduced and many of the older systems retired. Significant developments in active strategic defenses include the following:

- When completed by about 1987, the improved Moscow antiballistic missile (ABM) system will consist of 100 silo-based [redacted] and modified Galosh interceptors, providing an improved intercept capability against small-scale attacks on key targets around Moscow.
- By the end of the decade, when the new large phased-array radar network is expected to be fully operational, the Soviets will have a much improved capability for ballistic missile early warning, attack assessment, and accurate target tracking. These radars will be technically capable of providing battle management support to a widespread ABM system, but there are uncertainties and differences of view about whether the Soviets would rely on these radars to support a widespread ABM deployment.
- Deployment of new low-altitude-capable strategic air defense systems will increase. (See figure 6.) The Soviets are continuing to deploy the new SA-10 all-altitude surface-to-air missile (SAM), are deploying new aircraft with much better capabilities

Figure 6
Modernization of Soviet Strategic Air Defense Forces



[a] Represents uncertainty in our projections of modernization.

[b] New interceptors are: Foxhound, Fulcrum, Flanker, long-range interceptor.

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against low-flying targets, and will deploy the Mainstay airborne warning and control system (AWACS) aircraft in 1985.

— The SA-X-12 system, to be deployed in the Soviet ground forces in 1985-86, can engage conventional aircraft, cruise missiles, and tactical ballistic missiles. We are uncertain about its potential capabilities against strategic missiles. On the basis of a number of assumptions [ ] we conclude that it could have capabilities to intercept some types of US strategic ballistic missile RVs. Its technical capabilities bring to the forefront the problem that improving technology is blurring the distinction between air defense and ABM systems. This problem will be further complicated as newer, more complex air defense missile systems are developed.

Ballistic Missile Defense

We are particularly concerned that the Soviets' continuing development efforts give them the potential for widespread ABM deployments. [ ] We judge they could undertake rapidly paced ABM deployments to strengthen the defenses at Moscow and cover key targets in the western USSR, and to extend protection to key targets east of the Urals. Significant ABM forces could be deployed by the late 1980s or early 1990s, assuming the Soviets have already begun making some of the necessary preparations. [ ]

(For alternative views of the likelihood that the Soviets would initiate such deployments in the next few years, see volume I.)

Antisubmarine Warfare

The Soviets still lack effective means to locate US SSBNs at sea. We expect them to continue to pursue vigorously all antisubmarine warfare (ASW) technologies as potential solutions to the problems of countering US SSBNs and defending their own SSBNs against US attack submarines. We are concerned about the energetic Soviet effort to develop a capability to remotely sense submarine-generated effects from aircraft or spacecraft. [ ]

Although we continue to improve our understanding of the nature of

the Soviets' overall effort [ ] there remain important uncertainties about the full extent and direction of their program.

We do not believe there is a realistic possibility that the Soviets will be able to deploy in the 1990s a system that could reliably monitor US SSBNs operating in the open ocean. There is a low-to-moderate probability that the Soviets could deploy in the mid-1990s an ASW remote detection system that would operate with some effectiveness if enemy nuclear-powered attack submarines (SSNs) approached ASW barriers near Soviet SSBN bastions.

Directed-Energy and Hypervelocity Kinetic-Energy Weapons

Directed-energy and kinetic-energy weapons potentially could be developed for several strategic weapons applications—antisatellite (ASAT), air defense, battlefield use, and, in the longer term, ballistic missile defense (BMD). Because of the limited available evidence, there are large uncertainties about the size and scope of the Soviets' research efforts in key technologies, as well as about the status and goals of their weapon development programs.

There is strong evidence of Soviet efforts to develop high-energy laser weapons:

- On the basis of the high-energy laser efforts we have been able to observe, we estimate a laser weapon program of this magnitude would cost roughly $1 billion per year if carried out in the United States.
- Two facilities at the Saryshagan test range are assessed to have high-energy lasers with the potential to function as ASAT weapons.
- We are concerned about a large Soviet program to develop ground-based laser weapons for terminal defense against reentry vehicles. There are major uncertainties, however, concerning the feasibility and practicality of using ground-based lasers for BMD and about when the Soviets might have such systems operational. We expect them to test the feasibility of such a system during the 1980s, probably using one of the high-energy laser facilities at Saryshagan. An operational system could not be deployed until many years later, probably not until after the year 2000.
- The Soviets appear to be developing two high-energy laser weapons with potential strategic air defense applications—ground-based and naval point defense.

— The Soviets are continuing to develop an airborne laser.

— Soviet research includes a project to develop high-energy laser weapons for use in space. We estimate there is an even chance that a prototype high-energy, space-based laser ASAT weapon will be tested in low orbit in the early 1990s. Even if testing were successful, such a system probably could not be operational before the mid-1990s. An alternative view holds there is only a low probability of such tests by the early 1990s.[4]

The Soviets are also conducting research under military sponsorship for the purpose of acquiring the ability to develop particle beam weapons (PBWs)[ ] We believe the Soviets will eventually attempt to build a space-based PBW, but the technical requirements are so severe that we estimate there is a low probability they will test a prototype before the year 2000.

[ ] radiofrequency (RF) weapons to destroy the electronics of a target. The Soviets are strong in the appropriate technologies[ ] we judge they are capable of developing a prototype RF weapon system.

Since 1981 the Soviets have been constructing a large facility on top of a mountain near Dushanbe in the southernmost area of the USSR.

[ ] a directed-energy weapon function—either a laser or a radiofrequency ASAT weapon—seems most consistent with the available evidence. A somewhat less likely, but still plausible, function is deep space surveillance and/or space object identification. An alternative view holds that the evidence is insufficient to judge the purpose of the Dushanbe facility.[5]

Resources for Projected Developments and Arms Control Considerations

The Soviets are increasing their resource commitments to their already formidable strategic forces research, development, and deployment programs. We estimate that total investment and operating expenditures for projected Soviet strategic offensive forces (intercontinental attack and intermediate range) and strategic defensive forces

[4] *The holder of this view is the Director, Bureau of Intelligence and Research, Department of State.*

[5] *The holders of this view are the Director, Bureau of Intelligence and Research, Department of State, and the Assistant Chief of Staff for Intelligence, Department of the Army.*

(assuming no widespread ABM deployments) will result in a growth in total Soviet strategic force expenditures of between 5 and 7 percent a year over the next five years. (The rate would be 7 to 10 percent if widespread ABM defenses were deployed.) Strategic offensive and defensive forces account for about one-fifth of total defense spending—about one-tenth each.

A growth rate of 5 to 7 percent a year for strategic programs, combined with the projected growth rate for nonstrategic programs of about 3 percent, would lead to a growth in total defense spending of between 3 and 4 percent per year—greater than the projected growth rate of 2 percent for the GNP. Increasing the share of the GNP devoted to defense will confront the Soviets with the difficult choice of reducing the growth in investment, which is critical to modernizing the industrial base, or curtailing growth in consumption, which is an important factor in the Soviet drive to improve labor productivity.

Despite serious economic problems since the mid-1970s, Soviet military procurement has been at high annual levels; in particular, the Soviets have continued to procure large quantities of new strategic weapons. Since the mid-1970s the Soviets fielded their MIRVed ICBM force, and then improved it; deployed the MIRVed SLBM force on new SSBNs; and deployed their mobile SS-20 force. In recent years the Soviets have increased their resource commitments to emerging new systems, particularly with respect to the deployment of costly mobile missile systems.

While Soviet economic problems are severe, we see no signs that the Soviets feel compelled to forgo important strategic programs or that they will make substantial concessions in arms control in order to relieve economic pressures. Soviet force decisions and arms control decisions are likely to continue to be driven by calculations of political-strategic benefits and the dynamism of weapons technology. We believe, however, that, as a result of the stark economic realities, decisions involving the rate of strategic force modernization probably will be influenced by economic factors more now than in the past and some deployment programs could be stretched out. Major new initiatives would involve difficult trade-offs; in particular, if the Soviets decided to expand their ABM defenses far beyond the 100-launcher treaty limit, they might feel compelled to alter some of their other nonstrategic military modernization efforts, or to stretch out the ABM deployments somewhat. We judge, however, that strategic forces will continue to command the highest resource priorities and therefore would be affected less by economic problems than any other element of the Soviet military.

There is an alternative view that Soviet willingness to pay the price required for rapid deployment of an extensive nationwide ABM system will depend on the military and political context. The holder of this view believes historical evidence of the Soviets' ability to make large sacrifices indicates that they would make the necessary resource commitments to accomplish rapid deployments if deemed necessary.[6]

We believe the Soviets are determined to prevent any erosion of the military gains the USSR has made over the past decade. They recognize that new US strategic systems being deployed or under development will increase the threat to the survivability of their silo-based ICBM force, complicate their ASW efforts, and present their air defense forces with increasingly complex problems. By their actions and propaganda, the Soviets have demonstrated they are very concerned about the US Strategic Defense Initiative (SDI) and its focus on advanced technology. In their view, it could force them to redirect their offensive ballistic missile development programs to reduce vulnerabilities or could stimulate a costly, open-ended high-technology competition for which they probably are concerned that the United States can outpace their own ongoing efforts. They are probably also concerned that SDI will lead to a sustained US effort in strategic defenses—an area in which the Soviets have enjoyed a virtual monopoly.

Soviet leaders view arms control policy as an important factor in advancing their strategy of achieving strategic advantage. They have been willing to negotiate restraints on force improvements and deployments when it serves their interests. Moscow has long believed that arms control must first and foremost protect the capabilities of Soviet military forces relative to their opponents. The Soviets seek to limit US force modernization through both the arms control process and any resulting agreements. A salient feature of Soviet arms control policy will be its emphasis on trying to limit US ballistic missile defense and space warfare capabilities. The Soviets will try to use arms control discussions as a means of delaying or undercutting the US SDI program, but we do not believe they will offer major concessions to halt the program as long as it remains in the research stage and is strongly susceptible to unilateral US restraint.

Planning for Nuclear War

Soviet military planning is guided by fundamental Soviet wartime objectives: to decisively defeat enemy conventional and nuclear forces, occupy enemy territory in the theater, and defend the homeland

[6] *The holder of this view is the Assistant Chief of Staff for Intelligence, Department of the Army.*

against enemy attack. To meet these objectives, the Soviets train their forces for a global nuclear conflict. This training has diversified in scope and become increasingly complex in the operational factors with which it deals.

The Soviets apparently believe that a major nuclear conflict, if it occurred, would be likely to arise out of a NATO–Warsaw Pact conventional conflict preceded by a political crisis period that could last several weeks or longer. They perceive a conventional phase as lasting from a few days to as long as several weeks. The Soviets see little likelihood that the United States would initiate a surprise nuclear attack from a normal peacetime posture; we judge it is unlikely that the Soviets would mount such an attack themselves. Key objectives of the Soviets in the conventional phase would be to weaken the enemy's theater-based and sea-based nuclear forces with attacks by conventional weapons, while protecting their own nuclear forces. We estimate there is a high likelihood that the Soviets would attempt to interfere with selected US space systems that provide important wartime support, using both destructive and nondestructive means. The Soviets believe elements of their strategic forces would suffer losses during conventional conflict.

The Soviets are unlikely to initiate nuclear use in a theater conflict unless they perceived that NATO was about to use nuclear weapons, because they would probably see it as being to their advantage instead to keep the conflict at the conventional level. Moreover, the Soviets, in our judgment, are unlikely to initiate nuclear conflict on a limited scale, with small-scale use confined to the immediate combat zone, because they would see the use of nuclear weapons on any scale as substantially increasing the risks of escalation to strategic nuclear war. We believe, however, that the likelihood of Soviet initiation of nuclear strikes would increase if Soviet conventional forces were faced with a major defeat or a NATO counteroffensive into Eastern Europe.

If nuclear weapons were used in a theater conflict, with attacks confined to the theater area, the Soviets would have strong incentives to try to keep the nuclear conflict from spreading to involve the Soviet and US homelands. Thus, the Soviets might adopt a pragmatic approach and attempt to:

— Accomplish their theater objectives without carrying out intercontinental strikes.

— Create conditions that deter the United States from attacking the Soviet homeland.

— Prevent the United States from providing further support to the theater campaign.

We cannot judge the likelihood that the Soviets would actually attempt such a strategy. Evidence suggests they believe that it would be difficult to cap a theater nuclear conflict and that attempting to do so unsuccessfully could pose additional danger to the USSR. The Soviets would probably see an initial localized use of nuclear weapons as still leaving an opportunity to avoid large-scale nuclear war. However, once large-scale use of nuclear weapons in the theater occurred, imminent Soviet escalation to intercontinental nuclear war would be likely.

As the likelihood of large-scale nuclear conflict increased, Soviet leaders would face the difficult decision of whether to seize the initiative and strike, as would be consistent with their general military doctrine, or to be more cautious in the hope of averting large-scale nuclear strikes on the Soviet homeland. There are no easy prescriptions for what the Soviets would actually do under a particular set of circumstances, despite the apparent doctrinal imperative to mount large-scale preemptive nuclear attacks:

— We believe they would launch a coordinated theater and intercontinental strike in response to a large-scale theater nuclear strike against the western USSR.

— If they acquired convincing evidence that a US intercontinental strike were imminent, they would try to preempt. While we are unable to judge what information would be sufficiently convincing to cause Soviet leaders to order a large-scale preemptive attack, we believe they would be more likely to act on the basis of ambiguous indications and inconclusive evidence of US strike intentions if a battlefield nuclear conflict were under way than during a crisis or a conventional conflict.

— We believe the Soviets place considerable emphasis on assessing their strategic offensive capabilities under conditions in which the United States launched the initial major strike. These would include scenarios in which they were able to launch varying portions of their forces on tactical warning, as well as the most stressful scenario—in which they failed to launch on tactical warning and had to absorb a well-coordinated US counterforce attack. For the Soviets, these scenarios would be the most critical in an evaluation of their force requirements and capabilities.

In intercontinental strikes the Soviets would seek to neutralize US and Allied military operations and capabilities—to destroy US-based nuclear forces, to disrupt and destroy the supporting infrastructure and control systems for these forces as well as the National Command Authority, and to attempt to isolate the United States from the theater campaign by attacking its power projection capabilities. They probably would also attempt to reduce US military power in the long term by attacking other nonnuclear forces, US military-industrial capacity, and governmental control facilities, although the extent of the attack on these targets in the initial strikes could vary, depending on the circumstances.

The Soviets, following the initial large-scale nuclear strikes, plan to reconstitute some surviving general purpose and strategic forces and to occupy substantial areas of Western Europe, while neutralizing the ability of US and Allied nuclear forces to interfere with these objectives. The Soviets would clearly prefer to accomplish their objectives quickly, but recognize that the later phases could be protracted, given the difficulty and complexity of conducting operations following large-scale nuclear strikes. They prepare for combat operations that could extend weeks beyond an initial nuclear phase.

As force modernization proceeds, the Soviets will continue to rely primarily on silo-based ICBMs for use in initial strikes, while withholding many of their SLBMs and presumably most of their dispersed mobile ICBMs for subsequent strikes during later phases of nuclear conflict. They also would attempt to reload and refire some ICBMs, many SS-20s, and probably some SLBMs, using reserve missiles and equipment.

Taking into account the problems the Soviets are likely to face in a postattack environment and the apparently limited extent of preparations they have undertaken to cope with these difficulties, we estimate they probably would be able to reload and refire from silos over a period of weeks or months only a small portion of the reserve ICBMs they maintain in peacetime. The deployment of mobile ICBMs will lead to improved capabilities for ICBM reload.

There is an alternative view that the main text overstates the difficulties the Soviets would have in reconstituting their current silo-based ICBM force in nuclear conflict, given the extensive preparations this view holds they have made, and that consequently they would be able to refire a large portion of their reserve ICBMs.[7] According to

[7] *The holder of this view is the Director, Defense Intelligence Agency.*

another alternative view, the Soviets do not include ICBM, SLBM, and SS-20 reload and refire in their war plans. However, the Soviets probably would, in this view, attempt to reload a few launchers on a contingency basis, if any reserve missiles not required to maintain the online force were available. According to this view, a Soviet requirement for additional warheads would be better met by deployment of additional missiles on launchers. Furthermore, in this view, it is by no means clear that reload and refire operations during nuclear war would be less problematic for mobile launchers than for silos.[8]

Capabilities of Strategic Forces

The Soviets have enough hard-target-capable ICBM reentry vehicles today to attack all US missile silos and launch control centers and will have larger numbers of hard-target-capable RVs in the future. There are slightly differing views on the capabilities of the SS-18 to damage US Minuteman silos, leading to a best estimate of the expected damage to a silo from two Soviet warheads of about 70 percent, in one view, to about 80 to 85 percent, in the other.[

]The projected accuracy improvements for the new heavy ICBM we expect the Soviets to deploy in the late 1980s would result in a substantial increase in damage capability.

Soviet offensive forces will not be able to reliably target and destroy patrolling US SSBNs, alert aircraft, aircraft in flight, or dispersed land-mobile missiles, particularly those beyond the range of tactical reconnaissance systems. We believe that, in a crisis or conflict, the Soviets would credit undegraded US warning and control systems with the ability to launch ICBMs on tactical warning.

Dispersed Soviet mobile missiles, many SSBNs patrolling in waters near the USSR, and a large part of the silo-based ICBM force would survive an attack by current US forces. We judge that the Soviets can launch ICBMs on tactical warning, assuming their warning and command and control systems were undegraded. However, with the increasing vulnerability of Soviet ICBM silos during the period of this Estimate if more accurate US missiles are deployed, the Soviets will be faced with more difficult problems in assuring adequate retaliatory capabilities in their critical planning scenario in which they are struck first. We have seen no evidence of a program to significantly increase the hardness of their missile silos, and our analysis suggests the Soviets are unlikely to see much advantage in superhardening. The Soviets will

[8] *The holder of this view is the Director, Bureau of Intelligence and Research, Department of State.*

increasingly depend on their mobile ICBM and SLBM forces for their retaliatory capabilities.

Current Soviet antisatellite capabilities are limited and fall short of meeting the apparent Soviet requirement to be able to deny enemy use of space in time of war. In addition to the dedicated nonnuclear orbital interceptor, other systems—the nuclear Galosh ABM interceptor and two ground-based high-energy lasers—have the potential to destroy or interfere with some satellites in near-Earth orbit; these capabilities, however, would not survive a nuclear attack. Electronic warfare currently represents the only potential threat to satellites in higher orbits.

The Soviets, while well aware of their inability to prevent massive damage to the USSR with their strategic defenses, even with the improvements taking place in these forces, have a large program to provide protection for their leadership. We judge that, with as little as a few hours' warning, a large percentage of the wartime management structure would survive a large-scale US nuclear attack. [redacted] we estimate there are [redacted] possibly as many as 1,500 relocation facilities [redacted] for leaders at the national and regional levels [redacted] deep underground facilities for the top national leadership at Sharapovo and Chekhov [redacted] The Soviets may believe that such deep underground structures would assure the survivability of the top leadership—a key objective of their wartime management plans.

Any judgment about the overall effectiveness of the future Soviet air defense system against an attack by bombers and cruise missiles is subject to considerable uncertainty. Penetration of improved Soviet air defenses by currently deployed bombers would be more difficult. These defenses, however, would be considerably less effective against US cruise missiles. Our judgment is that, against a combined attack of penetrating bombers, short-range attack missiles (SRAMs), and cruise missiles, Soviet air defenses during the next 10 years probably would not be capable of inflicting sufficient losses to prevent large-scale damage to the USSR. We judge, however, that the Soviets will be able to provide an increasingly capable air defense for many key leadership, control, and military and industrial installations essential to wartime operations.

There is an alternative view that this Estimate substantially understates the capability of the Soviet air defense system to defend key target areas against low-altitude penetrators. The holder of this view believes that the effectiveness in such areas would be significantly higher against a combined attack of penetrating bombers, SRAMs, and cruise missiles than the Estimate suggests.[9]

While significant improvements in the capabilities of both Soviet and US strategic offensive forces will occur throughout the next 10 years, sizable forces on both sides would survive large-scale nuclear strikes. We believe that the Soviets' confidence in their capabilities for global conflict probably will be critically dependent on command and control considerations—the need for continuity in their own command and control capabilities, and their prospects for disrupting and destroying the ability of the United States and its Allies to command and to operate their forces. Although US attacks could destroy many known fixed command, control, and communications facilities, the Soviets have many key hardened facilities and redundant means of communications, [redacted] Thus, it seems highly likely that the Soviets could maintain overall continuity of command and control, although it would probably be degraded. The Soviets could experience difficulty in maintaining endurance and effectiveness for weeks of continuing operations, particularly if subjected to US strikes. Soviet long-range reconnaissance capabilities could be particularly affected.

We believe the Soviets would launch continuing attacks on US and Allied strategic command, control, and communications to prevent or impair the coordination of retaliatory strikes, thereby easing the burden on Soviet strategic defenses, and impairing US and Allied abilities to marshal military and civilian resources to reconstitute forces.

Concluding Observations

The evidence shows clearly that Soviet leaders are attempting to prepare their military forces for the possibility that they will actually have to fight a nuclear war and are training to be able to maintain control over increasingly complex conflict situations. They have seriously addressed many of the problems of conducting military operations in a nuclear war, thereby improving their ability to deal with the many contingencies of such a conflict, and raising the probability of outcomes favorable to the USSR. An alternative view notes that it should, at the same time, be recognized that the Soviets have not resolved many of the critical problems bearing on the conduct of nuclear war, such as the

[9] *The holder of this view is the Assistant Chief of Staff for Intelligence, Department of the Army.*

nature of initiation of conflict, escalation within the theater, and protracted nuclear operations. According to this view, while they will try to do the best they can, the Soviets recognize that nuclear war is so destructive, and its course so uncertain, that they could not expect an outcome that was "favorable" in any meaningful sense.[10]

The evidence that we have on how the Soviets would plan to conduct a successful military campaign provides insight into how they would seek to end a nuclear war on their terms—by neutralizing the ability of US intercontinental and theater nuclear forces to interfere with Soviet capabilities to prevail in a conflict in Eurasia.

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[10] *The holder of this view is the Director, Bureau of Intelligence and Research, Department of State.*

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